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Attorney Docket No. 100.104US01

Title: USING ALTERNATE POLARIZATION IN FIXED WIRELESS SYSTEM DEPLOYMENT FOR  
IMPROVED CAPACITYAMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A communication system comprising:  
a number of communication circuits disposed to divide a region into communication areas;  
wherein each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area; and  
*C /* wherein adjacent first portions of communication areas between for a plurality of different communication circuits use the same polarization to form substantially linear communication regions of the same polarization.

2. (Original) The communication system of claim 1 wherein the communication circuits in adjacent communication areas transmit using the same polarization in the adjacent portions of their communication areas.

3. (Original) The communication system of claim 1 wherein the first polarization comprises horizontal polarization.

4. (Original) The communication system of claim 3 wherein the second polarization comprises vertical polarization.

5. (Original) The communication system of claim 1 wherein the first and second portion of each communication area comprises approximately one half of the communication area.

6. (Original) The communication system of claim 1 further comprising a number of sectors within each communication area, each sector communicating on a subband of a frequency spectrum.

7. (Original) The communication system of claim 6 wherein each sector communicates on a different subband than the subband being communicated on by an adjacent sector.

8. (Original) The communication system of claim 6 wherein the first and second portions of the communication area are divided along a number of boundaries of the sectors.

C/ 9. (Original) The communication system of claim 1 wherein each communication circuit transmits signals using a first and second polarization.

10. (Original) The communication system of claim 1 wherein each communication circuit receives signals using a first and second polarization.

11. (Original) The communication system of claim 1 wherein each communication circuit transmits and receives signals using a first and second polarization.

12. (Currently amended) A communication system comprising:  
a number of communication circuits disposed to form substantially linear boundaries between communication regions; and  
wherein the communication circuits use a first polarization in one of the communication regions and a second, different polarizations for signals communicated in adjacent communication regions adjacent to the one of the communication regions.

13. (Original) The communication system of claim 12 wherein the first polarization comprises horizontal polarization.

14. (Original) The communication system of claim 13 wherein the second polarization comprises vertical polarization.

15. (Original) The communication system of claim 12 wherein the communication circuits are disposed to form communication areas within the communication regions.

16. (Original) The communication system of claim 15 further comprising a number of sectors within each communication area, each sector communicating on a subband of a frequency spectrum.

C/ 17. (Original) The communication system of claim 16 wherein the boundaries between communication regions lay along a number of boundaries of the sectors.

18. (Original) The communication system of claim 12 wherein each communication circuit transmits signals using a first and second polarization.

19. (Original) The communication system of claim 12 wherein each communication circuit receives signals using a first and second polarization.

20. (Original) The communication system of claim 12 wherein each communication circuit transmits and receives signals using a first and second polarization.

21. (Currently amended) A method comprising:  
dividing a region into a number of communication areas, each communication area including a communication circuit;  
communicating using a first polarization in a first portion of each communication area;  
communicating using a second polarization in a second portion of each communication area; and

wherein adjacent first portions of communication areas between for a plurality of different communication circuits use the same polarization to form communication region belts having the same polarization.

22. (Original) The method of claim 21 wherein the communicating includes using the same polarization for signals in adjacent communication areas.

23. (Original) The method of claim 21 wherein the first polarization comprises horizontal polarization.

24. (Original) The method of claim 23 wherein the second polarization comprises vertical polarization.

25. (Original) The method of claim 21 wherein the first and second portion of each communication area comprises approximately one half of the communication area.

26. (Original) The method of claim 21 further comprising dividing each communication area into a number of sectors, each sector communicating on a subband of a frequency spectrum.

27. (Original) The method of claim 26 wherein the first and second portions of the communication area are divided along a number of boundaries of the sectors.

28. (Original) The method of claim 21 wherein the communicating consists of transmitting.

29. (Original) The method of claim 21 wherein the communicating consists of receiving.

30. (Original) The method of claim 21 wherein the communicating consists of transmitting and receiving.

31. (Currently amended) A method comprising:

forming boundaries between bands of communication regions by disposing a number of communication circuits;

communicating using a first polarization in a first region band; and

communicating using a second polarization in bands that are an adjacent region to the first region band.

32. (Original) The method of claim 31 wherein the first polarization comprises a horizontal polarization.

33. (Original) The method of claim 32 wherein the second polarization comprises a vertical polarization.

34. (Original) The method of claim 31 further comprising forming communication areas by disposing the communication circuits within the communication regions.

35. (Original) The method of claim 34 further comprising dividing each communication area into a number of sectors, each sector communicating on a subband of a frequency spectrum.

36. (Original) The method of claim 35 wherein the boundaries between communication regions lay along a number of boundaries of the sectors.

37. (Original) The method of claim 31 wherein the communicating consists of transmitting.

38. (Original) The method of claim 31 wherein the communicating consists of receiving.

39. (Original) The method of claim 31 wherein the communicating consists of transmitting and receiving.

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## 40. (Currently Amended) A method comprising:

forming a number of communication areas, each communication area including a communication circuit, each communication circuit communicating using a first polarization in a first portion of each communication area and a second polarization in a second portion of each communication area;

forming a number of communication regions in belts of either the first or second polarization wherein adjacent first portions of communication areas ~~between~~ for a plurality of different communication circuits use the same polarization; and

forming a number of sectors within each communication area, where the first and second portions of the communication area are divided along a number of boundaries of the sectors, each sector communicating on a different subband of a frequency spectrum.

41. (Previously added) The method of claim 40 wherein the first polarization comprises horizontal polarization.

42. (Previously added) The method of claim 41 wherein the second polarization comprises vertical polarization.

43. (Previously added) The method of claim 40 wherein each sector subband is different than the subband being communicated on by an adjacent sector.

44. (Previously added) The method of claim 40 wherein the communicating consists of transmitting.

45. (Previously added) The method of claim 40 wherein the communicating consists of receiving.

46. (Currently amended) A communication system comprising:

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a number of communication circuits disposed to divide a region into communication areas;

wherein each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area; and

wherein adjacent first portions of communication areas ~~between~~ for a plurality of each pair of adjacent communication circuits use the same polarization to form communication region strips of the same polarization.

47. (Previously added) The communication system of claim 46 wherein the first polarization comprises horizontal polarization.

48. (Previously added) The communication system of claim 47 wherein the second polarization comprises vertical polarization.

49. (Previously added) The communication system of claim 46 wherein the first and second portion of each communication area comprises approximately one half of the communication area.

50. (Previously added) The communication system of claim 46 further comprising a number of sectors within each communication area, each sector communicating on a subband of a frequency spectrum.

51. (Previously added) The communication system of claim 50 wherein each sector communicates on a different subband than the subband being communicated on by an adjacent sector.

52. (Previously added) The communication system of claim 50 wherein the first and second portions of the communication area are divided along a number of boundaries of the sectors.

53. (Previously added) The communication system of claim 46 wherein each communication circuit transmits signals using a first and second polarization.

C1  
54. (Previously added) The communication system of claim 46 wherein each communication circuit receives signals using a first and second polarization.

[Please add the following new claims:]

55. (New) A communication system, comprising:

a first plurality of communication circuits disposed in a first row;  
a second plurality of communication circuits disposed in at least one additional row;  
wherein the first plurality of communication circuits and the second plurality of communication circuits use a first polarization between the first row and at least one additional row; and

wherein the first plurality of communication circuits and the second plurality of communication circuits use a second, different polarization for communications not between the first and at least one additional rows.

56. (New) The communication system of claim 55, wherein the first polarization comprises horizontal polarization and wherein the second polarization comprises vertical polarization.

57. (New) The communication system of claim 55, wherein each of the communication circuits transmits in an associated communication area, the communication area having a number of sectors, each sector using a subband of a frequency spectrum.

58. (New) The communication system of claim 57, wherein each sector uses a different subband than the subband used by an adjacent sector.

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59. (New) The communication system of claim 57, wherein a first group of the number of sectors for each communication circuit uses the first polarization and a second group of the number of sectors for each communication circuit uses the second polarization.

60. (New) A communication system, comprising:

a number of communication circuits disposed along a boundary between first and second substantially linear communication regions; and

wherein each communication circuit communicates with a first polarization in the first communication region on one side of the boundary and a second, different polarization in the second communication region on the other side of the boundary.

61. (New) The communication system of claim 60, wherein the first polarization comprises horizontal polarization and wherein the second polarization comprises vertical polarization.

62. (New) The communication system of claim 60, wherein each of the communication circuits transmits in an associated communication area, the communication area having a number of sectors, each sector using a subband of a frequency spectrum.

63. (New) The communication system of claim 62, wherein each sector uses a different subband than the subband used by an adjacent sector.

64. (New) The communication system of claim 62, wherein a first group of the number of sectors for each communication circuit uses the first polarization and a second group of the number of sectors for each communication circuit uses the second polarization.

65. (New) A method comprising:

disposing a plurality of communication circuits on a boundary between first and second regions;

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configuring each of the plurality of communication circuits to communicate using a first polarization in the first region; and

configuring each of the plurality of communication circuits to communicate using a second, different polarization in the second region.

66. (New) The method of claim 65, wherein disposing a plurality of communication circuits on a boundary comprises disposing the plurality of communications circuits in a substantially linear row.

C / 67. (New) The method of claim 65, wherein configuring each of the plurality of communication circuits to communicate using a first polarization in the first region comprises configuring each of the plurality of communication circuits to communicate using one of horizontal polarization and vertical polarization in the first region.

68. (New) The method of claim 67, wherein configuring each of the plurality of communication circuits to communicate using the second, different polarization in the second region comprises configuring each of the plurality of communication circuits to communicate using the other of horizontal polarization and vertical polarization in the second region.

69. (New) A method, comprising:

disposing a first plurality of communication circuits in a first row;

disposing a second plurality of communication circuits in at least one additional row;

configuring the first plurality of communication circuits and the second plurality of communication circuits to use a first polarization between the first row and the at least one additional row; and

configuring the first plurality of communication circuits and the second plurality of communication circuits to use a second, different polarization for communications not between the first and at least one additional rows.